

AMENDMENTS TO THE SPECIFICATION

At page 4, line 35, please insert the following Brief Description of the Drawings.

BRIEF DESCRIPTION OF DRAWINGS:

Referring now to the figures, which are exemplary embodiments, and wherein the like elements are numbered alike:

Figure 1 illustrates a flow cell in preferred embodiments. Figures 1a, 1b, and 1c are preferred embodiments of the flow cell in side view, and Figure 1d is a plan view of the flow cells illustrated in Figures 1a, 1b, and 1c.

Figure 2 illustrates deformation of a fluid element with dimensions a, b, and c in one embodiment of the flow cell.

Figure 3 illustrates the arrangement of the optical unit and sample analysis unit in relation to each other.

Figure 4 illustrates optics with illumination at one angle and measurement at a plurality of reflectance angles.

Figure 5 illustrates the light beam path with illumination at one angle and measurement at a plurality of reflectance angles.

Figure 6 illustrates optics with illumination at a plurality of illumination angles.

Figure 7 is a side view of the reflectance sensor with three-dimensional flow cell for measuring liquid samples containing non-isometric particles.

Figure 8 illustrates an example of a reflectance sensor for measuring solid samples (sheet-metal cell).

Figure 9 illustrates an example of a reflectance sensor for measuring a calibration standard (reference cell).

Figure 10 illustrates a preferred embodiment of an attenuator. Figure 10a is a plan view and Figure 10b is a side view of the attenuator.

Figure 11 illustrates a system preferably used for reflectance measurement. Figure 11a is a side view and Figure 11b is a front view.

Figure 12 illustrates a general measurement structure of a highly accurate flow oriented multi angle reflectance sensor (FLOMAC).

Figure 13 illustrates optics with illumination at one angle and measurement at a plurality of angles (FLOMAC dome).

Please replace page 5, line 36 to page 6, line 4 with the following.

Figure 1 illustrates a flow cell in preferred embodiments, (Figs 1a, 1b, 1c, 1d), and Figure 2 illustrates the deformation of a fluid element with dimensions a, b, c.

Figure 1: Preferred embodiments of the flow cell. Figures 1a, 1b, 1c are preferred embodiments of the flow cell in side view and Figure 1d is a plan view of the flow cells illustrated in Figures 1a, 1b, 1c (identical for all three embodiments).

HereWith reference to Figure 1:

Please replace page 6, ll. 21-23 with the following:

Figure 2: illustrates the deformation of a fluid element with dimensions a, b, c in one embodiment of the flow cell of the invention.

HereWith reference to Figure 2:

Please replace page 12, lines 21-25 with the following.

An example of a reflectance sensor is illustrated in Figure 3, which depicts the arrangement of optical unit and sample analysis unit in relation to each other.

HereWith reference to Figure 3:

Please replace page 21, line 33 to page 22, line 1 with the following.

One example of such optics is illustrated in Figure 4. An example of the associated beam path is illustrated in figure 5. Figure 4: which shows the Optics with illumination at one angle and measurement at a plurality of reflectance angles.

HereWith reference to Figure 4:

Please replace page 22, lines 18-21 with the following.

An example of the associated beam path is illustrated in Figure 5. Figure 5:-which depicts Beam-path with illumination at one angle and measurement at a plurality of reflectance angles. HereWith reference to Figure 5:

Please replace page 23, lines 22-26 with the following.

One example of such optics is illustrated in [[f]]Figure 6[[.]], Figure 6:-which depicts Optics-with-illumination at a plurality of illumination angles. HereWith reference to Figure 6:

Please replace the paragraph on page 28, lines 10-29 with the following paragraph.

Figure 7 illustrates a preferred embodiment of a reflectance sensor having a sample analysis unit (B) for the reflectance measurement of liquid samples containing non-isometric particles, comprising the measuring window (Ba) and the sample analysis cell with three-dimensional flow cell (Bb) and also a holder for the fiber optics (Ab) of the optical unit (A).

Figure 7:—Reflectance sensor with three-dimensional flow cell for measuring liquid samples containing non-isometric particles

HereWith reference to Figure 7:

- 101 is the baseplate (mounting plate)
- 102 is the holder for the measuring window
- 103 is the measuring window
- 104 is the opening for the fiber system
- 105 is the drip edge
- 106 is the basic product cell body
- 107 is the product outlet
- 108 is the product feed with specific three-dimensional form for the alignment
- 109 is the shearing gap

Please replace the paragraphs on page 30, line 10 to page 31, line 4 with the following paragraph.

Figure 8 illustrates an example of a reflectance sensor for measuring solid samples (sheet-metal cell), and figure 9 illustrates an example of a reflectance sensor for measuring a calibration standard (reference cell).

Figure 8:—Reflectance sensor for measuring solid samples

Here ~~With reference to Figure 8:~~

- 201 is the baseplate (mounting plate)
- 202 is the holder for the measuring window
- 203 is the measuring window
- 204 is the opening for the fiber system
- 205 is the drip edge
- 206 is a spacer
- 207 is a solid sample
- 208 is a spring element
- 209 is a pressure element
- 210 is guide rods

Figure 9 illustrates an example of a reflectance sensor for measuring a calibration standard (reference cell).

Figure 9:—Reflectance sensor for measuring a calibration standard

Here ~~With reference to Figure 9:~~

- 301 is the baseplate (mounting plate)
- 302 is the holder for the measuring window
- 303 is the measuring window
- 304 is the opening for the fiber system
- 305 is the drip edge

306 is the basic reference cell body

307 is a spacer

308 is the reference standard

309 is a variable pressure system

Please replace the paragraphs on page 32, line 18 to page 33, line 27 with the following paragraph.

A particularly preferred embodiment of an attenuator is illustrated in ~~[[f]]~~Figures 10a and 10b. Figure 10a is a plan view and Figure 10b is a side view of the attenuator.

Figure 10: Preferred embodiment of an attenuator

Figure 10a (plan view) and 10b (side view)

~~Here~~With reference to Figures 10a and 10b:

401 is an SMA socket for the receiver

402 is the basic body

403 is a diffuser (optional)

404 is a neutral filter (optional)

405 is a conversion filter (optional)

406 is an SMA socket for the transmitter

407 is a clamping device

408 is a piston

409 is guided rods (optional)

410 is a carriage (optional)

411 is a drive rod (optional)

412 is a motor holder (optional)

413 is a motor

A system preferably used for reflectance measurement is illustrated in ~~[[f]]~~Figure 11.

Figure 11a is a side view and Figure 11b is a front view.

Figure 11: System preferably used for reflectance measurement

Figure 11a (side view) and 11b (front view)

HereWith reference to Figures 11a nd 11b:

- 501 is a light source
- 502 is a spectrometer with optical attenuator (number: 1 - maximum 8)
and amplifier
- 503 is a cooler
- 504 is a PC with AD (analog/digital) converter
- 505 is a pump
- 506 is the flow cell
- 507 is the measuring window
- 508 is a fiber holder
- 509 is fibers, preferably glass fibers (the number of fibers can be higher than illustrated
in the figure)
- 510 represents pressure measurement
- 511 is a receiving container
- 512 is a stirrer, for example magnetic stirrer
- 513 is the mobile housing
- 514 is cooling water

Please replace the paragraphs on page 34, lines 1-34 with the following paragraph.

The general measurement structure of a highly accurate flow oriented multi angle reflectance sensor is illustrated in [[f]]Figure 12, and the optics with illumination at one angle and measurement at a plurality of angles in the form of what is known as a "FLOMAC dome" is illustrated in [[f]]Figure 13. ~~In this case, FLOMAC means a~~ FLOMAC stands for "flow oriented multi angle 5 color sensor".

Figure 12: General measurement structure of a highly accurate flow oriented multi-angle reflectance sensor (FLOMAC)

HereWith reference to Figure 12:

- 601 represents pressure monitoring
- 602 is a spectrometer
- 603 is the FLOMAC dome
- 604 is a FLOMAC cell
- 605 is a stirrer
- 606 is a receiver
- 607 is a pump

Figure 13: Optics with illumination at one angle and measurement at a plurality of angles: "FLOMAC dome"

HereWith reference to Figure 13:

- 701 is a receiver at -15°
- 702 is a spectrometer
- 703 is a receiver at 15°
- 704 is a receiver at 25°
- 705 is a receiver at 45°
- 706 is a receiver at 75°
- 707 is illumination
- 708 is a receiver at 105°
- 709 is the FLOMAC dome
- 710 is a FLOMAC cell